REMARKS

I. INTRODUCTION

Claims 75, 83, 95 and 103 have been amended but not for any reason relating to patentability thereof, and to address the Examiner's comments contained in the Final Office Action. New claims 142-146 have been added. Accordingly, claims 68-146 are now under consideration in the above-referenced application. Provided above, please find a claim listing indicating the status of the presently-unamended claims, the amendments of claims 75, 83, 95 and 103 and the addition of new claims 142-146 on separate sheets so as to comply with the requirements set forth in 37 C.F.R. § 1.121. It is respectfully submitted that no new matter has been added.

II. OBJECTIONS TO CLAIMS 75-78, 83, 95-98 and 103

Claims 75-78, 83, 95-98 and 103 stand objected to.

In particular, the Examiner objected to claims 83 and 103 regarding the recitation of "cooperative with" as recited in these claims. As the Examiner shall ascertain, claims 83 and 103 have been amended to recite "a fluid displacement arrangement ... acts on the dispersive arrangement."

Regarding claims 75-79 and 95-98, these claims have been objected to as allegedly not including structural limitations. As the Examiner shall ascertain, claims 75 and 95 have been amended to recite "at least further arrangement which is structured to obtain the information based on a radiation obtained from the structure, wherein the information is at least one of a two-dimensional image or a three dimensional image." Claims 76-78 and claims 96-98 depend from amended claims 75 and 95, respectively.

Accordingly, for at least these reasons, the objections to 75-78, 83, 95-98 and 103 are moot, and should therefore be withdrawn.

III. REJECTIONS UNDER 35 U.S.C. §§ 102(b) AND 103(a) SHOULD BE WITHDRAWN

Claims 68-73, 75, 79-82, 86 and 87 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,141,362 issued to Wurster (the "Wurster Patent"). Claims 74, 76-78, 84, 85, 89-102, 104-107, 109-116, 118-128 and 130 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the Wurster Patent, in view of U.S. Patent No. 4,607,622 issued to Fritch et al. (the "Fritch Patent"). Claims 83, 88, 103, 108, 117, 129 and 131-136 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the Wurster Patent in view of the Fritch Patent, and in further view of U.S. Patent No. 3,941,121 issued to Olinger et al. (the "Olinger Patent"). Claims 137 stands finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the Wurster Patent, in view of U.S. Patent No. 5,318,024 issued to Kittrell et al. (the "Kittrell Patent"). Claims 138-141 stand finally rejected under 35 U.S.C. § 103(a) as being unpatentable over the Wurster Patent in view of the Fritch Patent, and in further view of the Kittrell Patent. Applicants respectfully assert that the Wurster Patent, taken alone or in combination with the Fritch Patent, the Olinger Patent and/or the Kittrell Patent, fails to teach, suggest or disclose the subject matter recited in independent claims 68, 89, 113, 125 and 131, and the claims which depend therefrom.

In order for a claim to be rejected as anticipated under 35 U.S.C. § 102, each and every element as set forth in the claim must be found, either expressly or inherently described, in a single prior art reference. Manual of Patent Examining Procedures, §2131;

also see Lindeman Machinenfabrik v. Am Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

Under 35 U.S.C. § 103(a), a person is not entitled to a patent even though the invention is not identically disclosed or described as set forth in §102, "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a).

The objective standard for determining obviousness under 35 U.S.C. § 103, as set forth in *Graham v. John Deere, Co.*, 383 U.S. 1 (1966), requires a factual determination to ascertain: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; and (3) the differences between the claimed subject matter and the prior art. Based on these factual inquiries, it must then be determined, as a matter of law, whether or not the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the alleged invention was made. *Graham*, 383 U.S. at 17. Courts have held that there must be some suggestion, motivation or teaching of the desirability of making the combination claimed by the applicant (the "TSM test"). *See In re Beattie*, 974 F.2d 1309, 1311-12 (Fed. Cir. 1992). This suggestion or motivation may be derived from the prior art itself, including references or disclosures that are known to be of special interest or importance in the field, or from the nature of the problem to be solved. *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996).

Although the Supreme Court criticized the Federal Circuit's application of the TSM test, *see KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, (2007) the Court also indicated that the TSM test is not inconsistent with the *Graham* analysis recited

in the *Graham v. John Deere* decision. *Id.*; *see In re Translogic Technology, Inc.*, No. 2006-1192, 2007 U.S. App. LEXIS 23969, *21 (October 12, 2007). Further, the Court underscored that "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR*, 127 S. Ct. at 1741. Under the precedent established in *KSR*, however, the presence or absence of a teaching, suggestion, or motivation to make the claimed invention is merely one factor that may be weighed during the obviousness determination. *Id.* Accordingly, the TSM test should be applied from the perspective of a person of ordinary skill in the art and not the patentee, but that person is creative and not an automaton, constrained by a rigid framework. *Id.* at 1742. However, "the reference[s] must be viewed without the benefit of hindsight afforded to the disclosure." *In re Paulsen*, 30 F.3d 1475, 1482 (Fed. Cir. 1994).

The prior art cited in an obviousness determination should create a reasonable expectation, but not an absolute prediction, of success in producing the claimed invention. *In re O'Farrell*, 853 F.2d. 894, 903-04 (Fed. Cir. 1988). Both the suggestion and the expectation of success must be in the prior art, not in applicant's disclosure. *Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200, 1207 (Fed. Cir. 1991) (citing *In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988)). Further, the implicit and inherent teachings of a prior art reference may be considered under a Section 103 analysis. *See In re Napier*, 55 F.3d 610, 613 (Fed. Cir. 1995).

Secondary considerations such as commercial success, long-felt but unsolved needs, failure of others, and unexpected results, if present, can also be considered. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538-39 (Fed. Cir. 1983).

Although these factors can be considered, they do not control the obviousness conclusion. *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988).

The Wurster Patent relates to a laser endoscope or an endoscope equipped both with an observation optic and a Laser beam, including a deflectable reflector enabling the laser beam to scan the body tissue and a focus enabling the laser beam focal plane to be varied depth-wise in the body tissue. (See Wurster Patent, Title and Abstract). The endoscope includes a shaft which accommodates, besides an observation optic 3, a longitudinally extending tube 19 in a parallel channel. The focusable Laser beam is admitted in this tube through the aperture of a stud 20 and a prism 21 in the longitudinal direction, and at the distal end it impinges on a deflection reflector 1 which allows the Laser beam to scan on the object side an area of the tissue being treated within the viewing field of the observation optic. (See *id.*, col. 3, lns. 8-19; and Fig. 4).

The Fritch Patent relates to an ocular endoscope having a minimum cross-section and designed primarily for use in treating, diagnosing and investigating problems associated with the eye. The endoscope includes a probe which comprises a first bundle of fiber optics carrying light for illumination, a second coaxial bundle of fiber optics terminating in a lens and adapted to view areas being illuminated completely surrounded by a plastic sheath that is semi-rigid and malleable and capable of assuming and holding a preferred shape. (See Fritch Patent, Abstract).

The Olinger Patent relates to a needle endoscope includes a hollow needle of about 18-gauge, a lens system within the needle, an image transmitting bundle of flexible fiber-optic rods within the needle, a plurality of illumination transmitting fiber-optic rods within the needle, an operative channel within the needle, and apparatus to shift the image

transmitting bundle with respect to the lens system and needle to provide focus adjustment for focusing the endoscope on objects at various distances from the end of the needle. (See Olinger Patent, Abstract).

The Kittrell Patent describes a laser endoscope for generating a spectrally resolved spatial image of tissue. Fiber optics positioned within an optically shielded endoscope are used to deliver laser radiation to tissue to be imaged. Radiation returning through the fiber optics from the tissue is spectrally resolved and used to generate an image of tissue that can assist in diagnosis and treatment. (See Kittrell Patent, Abstract). The apparatus of the Kittrell Patent can include a prism. (See *id.*, Fig. 13D).

Applicants' invention, as recited in independent claim 68, relates to an apparatus for obtaining information for a structure which comprises, *inter alia*:

> a lens arrangement which is configured to provide there through electro-magnetic radiation; and
>
> **a dispersive arrangement configured to receive at least one portion of the electro-magnetic radiation** and **forward a dispersed radiation thereof** to at least one section of the structure.

Applicants' invention, as recited in independent claim 89, relates to an apparatus for obtaining diagnostic information for a structure and modifying at least one property of at least one portion of the structure which comprises, *inter alia*:

> a plurality of fibers each of which is configured to provide there through the electro-magnetic radiation, at least one first fiber of the fibers being configured to provide a first electro-magnetic radiation to the at least one portion so as to obtain the information, and at least one second fiber of the fibers configured to provide a second electro-magnetic radiation to the at least one portion so as to modify the at least one property; and
>
> **a dispersive arrangement configured to receive the first and second electromagnetic radiations**.

Applicants' invention, as recited in independent claim 113, relates to an apparatus for obtaining information for a structure which comprises, *inter alia*:

> **a dispersive arrangement configured to receive a plurality of electro-magnetic radiations** and **forward a dispersed radiation of each of the electro-magnetic radiations to at least one portion of the structure** and at least partially overlap the at least one portion ... .

Applicants' invention, as recited in independent claim 125, relates to an apparatus for obtaining information for a structure which comprises, *inter alia*:

> **a dispersive arrangement configured to receive at least one portion of an electro-magnetic radiation and forward a dispersed radiation thereof to a particular location** on at least one portion of the structure ... .

Applicants' invention, as recited in independent claim 131, relates to an apparatus for obtaining information for a structure which comprises, *inter alia*:

> a lens arrangement which is configured to provide there through electro-magnetic radiation; and
>
> **a dispersive arrangement configured to receive at least one portion of the electro-magnetic radiation** and **forward a dispersed radiation thereof to at least one portion** ... .

Thus, each of independent claims 68, 89, 113, 125 and 131 recites a "dispersive arrangement." Applicants again respectfully assert that Wurster Patent in no way teaches or suggest, much less discloses an apparatus for obtaining information for a structure which includes **a dispersive arrangement that is configured to receive at least one portion (or a plurality) of the electro-magnetic radiation(s)**, as explicitly recited in independent claims 68, 89, 113, 125 and 131 of the above-identified application.

In the prior non-final Office Action, the Examiner points to a prism 21 of the Wurster Patent being used within the endoscopic arrangement. (See Office Action dated

October 9, 2007, p. 2, lns. 17-18). Accordingly, it appears that the Examiner is equating the prism 21 of the Wurster Patent to the dispersive arrangement as recited in independent claims 68, 89, 113, 125 and 131. Then, in the latest Final Office Action, the Examiner contends that "the prism [of the Wurster Patent], in conjunction with the tube 19 and mirror 1 provides a dispersive arrangement." (Final Office Action, p. 2, lns. 16-19).

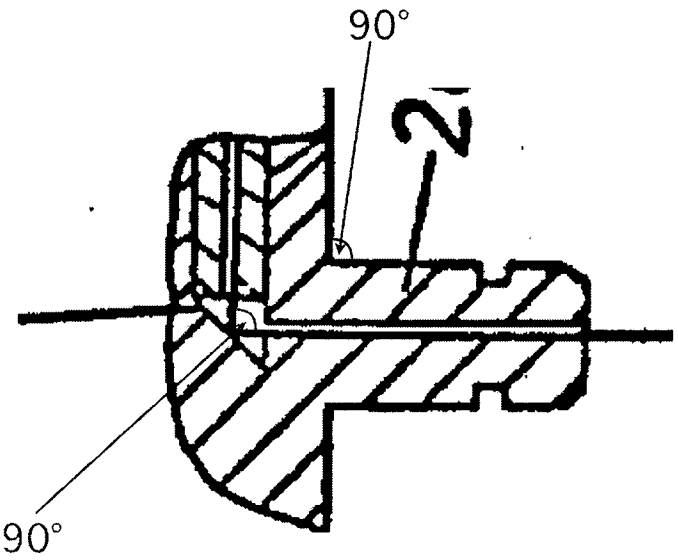
However, Applicants again assert that the prism 21 shown and described in the Wurster Patent, whether operating alone or in conjunction with the tube 19 and/or the mirror 1, is a *non-dispersive prism*. Indeed, the Examiner may have misunderstood the disclosure of the Wurster Patent and the knowledge of those having ordinary skill in the art at the time the claimed subject matter of the present application was filed with respect to dispersive prisms and non-dispersive prisms. In the Final Office Action, the Examiner apparently relies on the definition of a prism in Cambridge Dictionary Online as "a transparent object, often glass, that separates while light into different colors." (*Id.*, p. 2, lns. 7-9). However, such definition is surely not understood or used by those having ordinary skill in the art as an appropriate definition of prisms.

In particular, it is surely known to those have ordinary skill in the art that there are two types of prisms: *non-dispersive* prisms and *dispersive* prisms – as described in the standard optics reference. (See Handbook of Optics, Second Edition, Vol. II, 1995, Chapter 4 , Title – NON-DISPERSIVE PRISMS and Chapter 5 - DISPERSIVE PRISMS AND GRATING "Handbook of Optics" – copies of relevant sections attached herewith). It is known to those having ordinary skill in the art that the non-dispersive prisms are generally utilized to deflect a beam and avoid chromatism (and have the same function as a mirror). In contrast, the dispersive prisms are generally utilized to angular distribute the different

wavelength of incident light, can be typically a component of a spectrometer, and is also of a similar functional class as a grating. (See Handbook of Optics). It is also known in the art that the right-angle non-dispersive prisms are preferable for deflecting beams, especially within endoscopic devices because such non-dispersive prisms can be more easily affixed to optical components (as opposed to a mirror).

a. Non-Dispersive Prism of Wurster Patent

The angle of the light reflected from the back surface of the prism 21 of Wurster Patent is shown therein as being 90 degrees. (See portion of Fig. 4 of Wurster Patent) In addition, based on the description provided in the Wurster Patent regarding the usage of its prism 21, the above-described indication of the angle of reflection of the Wurster Patent is supported by the structure of the laser endoscope described in the Wurster Patent. In particular, the tube 19 of the Wurster Patent is also provide at 90 degrees with respect to the stud 20, and thus, the prism 21 reflect the light entering the stud 20 is also provide at 90 degrees to be directed to the tube 19.



Thus, based on the above discussion as well as the description and drawings of the Wurster Patent, the prism 21 thereof is a right-angle prism. As indicated in the Handbook of Optics, Second Edition, Vol. II, 1995, sect. 4.2 and 4.3, and table 1 therein (copies of the relevant sections are attached), the right angle prisms – as the prism 21 of the Wurster Patent - are non-dispersive. Thus, the Wurster Patent fails to anticipate independent claims 68, 89, 113, 125 and 131 of the above-identified application which recite **a dispersive arrangement that is configured to receive at least one portion (or a plurality) of the electro-magnetic radiation(s)**.

b. Monochromatic Light vs. Polychromatic Light

Throughout the Wurster Patent, it is provided that the light utilized in the endoscope is a laser. In fact, the apparatus of the Wurster Patent is called a "laser endoscope." (See Wurster Patent, Title). At the time that the patent application (which issued as the Wurster Patent) was filed, the commonly used lasers has single or discrete longitudinal modes and/or were monochromatic. Certain lasers, such as Ar lasers, known at that time had a plurality of monochromatic wavelengths, but not a continuum of wavelengths or a continuous spectrum. Thus, the Wurster Patent certainly does not describe such continuum of wavelengths.

One having ordinary skill in the art, when reviewing the Wurster Patent, would certainly realize that the lasers used therein necessary emit monochromatic light. Furthermore, the lasers described in the Wurster Patent (i.e., an argon Laser of high output, a YAG-Neodyme Laser or a holmium Laser – see col. 2, lns. 6-9 thereof) all produce discrete mono-chromatic beams – which is a non-continuum of wavelengths.

Thus, it would have been ***disadvantageous for the device described in the Wurster Patent*** to have a continuum of wavelengths, and thus for at least that reason ***to utilize a dispersive prism***. This is because if the device of the Wurster Patent used the dispersive prism and continuum of wavelengths (or broadband light), the therapeutic application of such device would not be as effective. In contrast, e.g., the broadband source or a wavelength tuned source can be used to produce continuum of wavelengths of radiation. Such radiation (e.g., continuum of wavelengths of radiation) can be received by a dispersive arrangement and forwarded thereby to the structure, as recited in independent claims 68, 89, 113, 125 and 131.

c. *Prima Facia* Case of Anticipation

In the Final Office Action, the Examiner also apparently does not believe that "there is enough evidence to confirm this assumption [i.e., that the prism of the Wurster Patent is a non-dispersive prism]." (Final Office Action, p. 2, lns. 14-15). However, the Examiner failed to point to any portion of the Wurster Patent which would disclose the prism 21 to be a dispersive prism, as recited in independent claims 68, 89, 113, 125 and 131 of the present application.

Indeed, as provided above, the prism 21 of the Wurster Patent is in no way a *dispersive* prism. Further, the Examiner did not establish a *prima facia* case of anticipation for rejecting independent claims 68, 89, 113, 125 and 131 of the present application. Clearly, to meet this burden, the Examiner is required to show that the reference discloses each and every feature of the claim. The possibility that a component can perform a

particular function without stating such function in the reference certainly does not meet that burden.

The Fritch, Olinger and Kittrell Patents do not cure such deficiencies of the Wurster Patent, and the Examiner does not contend that they do.

d. Summary

Accordingly, Applicants respectfully submit that the Wurster Patent, taken alone or in combination with the Fritch Patent and/or the Olinger Patent, does not render obvious the subject matter recited in independent claim 68, 89, 113, 125 and 131. The claims which depend from such independent claims are also not taught, suggested or disclosed by the Wurster Patent, taken alone or in combination with the Fritch Patent, the Olinger Patent and/or the Kittrell Patent for at least the same reasons.

e. Dependent Claims

In addition, with respect to claims 76-78 and 96-98 which depend from independent claims 68 and 89, respectively, these claims now recite **at least one further arrangement which is structured to obtain a two-dimensional image and/or a three-dimensional image for the structure contains a certain amount of resolvable points** (e.g., from about 300,000 to 1,000,000 resolvable points as provided in claims 76 and 96, from about 150,000 to 300,000 resolvable points as provided in claims 77 and 97, and from about 100,000 to 150,000 resolvable points as provided in claims 78 and 98). In the previous Office Action, the Examiner rejects claims 76-78 and 96-98 as being obvious over the Wurster Patent, in view of the Fritch Patent. However, the Fritch Patent fails to even

mention, or even teach or suggest **at least one further arrangement which is structured to obtain a two-dimensional image and/or a three-dimensional image for the structure contains a certain amount of resolvable points**, much less the specific range of the resolvable points as recited in claims 76-78 and 96-98.

In the Final Office Action, the Examiner did not consider the recitations provided in these claims as allegedly lacking structural limitations therein. (See Final Office Action, p. 2, ln. 19 to p. 3, ln. 5). While Applicants disagree with such position, claims 75 and 95 (from which claims 76-78 and 96-98, respectively depend) have been amended above to recite at least one further arrangement which is structured to obtain a two-dimensional image and/or a three-dimensional image. Accordingly, the recitations provided in claims 76-78 and 96-98 should certainly be considered, and the Examiner should indicate which prior art of record, if any, discloses, teaches or suggests such recited subject matter.

Regarding claims 83 and 103, these claims depend from independent claims 68 and 89, respectively, and further now include the recitation of **a fluid displacement arrangement acts on the dispersive arrangement**. The Examiner appears to be attempting to combine the Olinger Patent with the alleged combination of the Wurster and Fritch Patents to allegedly teach or suggest such subject matter. However, even if, *arguendo*, the Olinger Patent describes a needle which is part of or includes a fluid displacement arrangement, the Olinger Patent fails to cure the deficiencies of the Wurster Patent and the Fritch Patent to teach or suggest that any such fluid displacement arrangement *acts on the dispersive arrangement*. No such action is even mentioned, much less taught or suggested in the Olinger Patent. In the Final Office Action, the Examiner

questioned the breadth of these claims, with respect to the "cooperation" between the fluid displacement arrangement and the dispersive arrangement. As provided herein above, claims 83 and 103 have been amended to recite that **a fluid displacement arrangement acts on the dispersive arrangement**. Indeed, the Wurster Patent, taken alone or in combination with the Olinger Patent, does not teach, suggest or disclose such subject matter.

Thus, for at least these reasons, withdrawal of the rejections of these claims under 35 U.S.C. §§ 102(b) and 103(a) is respectfully requested.

IV. NEW CLAIMS 142-146

New claims 142-146 are provided to cover certain exemplary embodiments of the present application. Support for these claims can be found in the originally-filed specification and drawings. Claims 142-146 depend from independent claims 68, 89, 113, 125 and 131, respectively. These claims are believed to be unanticipated and not rendered obvious by the Wurster Patent, taken alone or in combination with the Fritch Patent, the Olinger Patent and/or the Kittrell Patent for at least the same reasons as presented herein above. Applicants respectfully request that the Examiner provide a confirmation that new claims 142-146 meet the requirements for patentability in the next communication.

V. CONCLUSION

In light of the foregoing, Applicants respectfully submit that all pending claims 68-146 are in condition for allowance. Prompt consideration, reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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